

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-65

Relating to Certification of New Heavy-Duty Engines and Vehicles

DETROIT DIESEL CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following 1998 model-year Detroit Diesel Corporation diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
WDDXH11.1EHD (Series-60)	11.1 (677)	Turbocharger Charge Air Cooler Powertrain Control Module

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour:

<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.3	15.5	4.0	0.10

The following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
0.1	1.4	3.9	0.09

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

BE IT FURTHER RESOLVED: That the aforementioned engine family has been conditionally certified subject to the following conditions:

1. Any engine which employs a defeat device shall not be covered by this Executive Order.
2. Within 90 days following the issuance of this Executive Order, the manufacturer must show cause, to the satisfaction of the Executive Officer or his designee, that the strategy for fuel injection timing, including timing during the fuel economy mode, is not a defeat device.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 17<sup>th</sup> day of February 1998.



R. B. Summerfield, Chief  
Mobile Source Operations Division

# LARGE ENGINE MODEL SUMMARY

A-290-65

Process Code: **New Submission**

Manufacturer: **Detroit Diesel Corporation**

Manufacturer Family Name: **Series 60, 11.1L**

EPA Engine Family: **WDDXH11.1EHD**

9. Emission Control Device Per SAE J1930

8. Fuel Rate: (lbs/hr) @ peak torque

7. Fuel Rate: mm<sup>3</sup>/stroke @ peak torque

6. Torque @ RPM (SEA Gross)

5. Fuel Rate: (lbs/hr) @ peak HP (for diesels only)

4. Fuel Rate: mm<sup>3</sup>/stroke @ peak HP (for diesel only)

3. BHP @ RPM (SAE Gross)

1. Engine Code	2. Engine Model	3. BHP @ RPM (SAE Gross)	4. Fuel Rate: mm <sup>3</sup> /stroke @ peak HP (for diesel only)	5. Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6. Torque @ RPM (SEA Gross)	7. Fuel Rate: mm <sup>3</sup> /stroke @ peak torque	8. Fuel Rate: (lbs/hr) @ peak torque	9. Emission Control Device Per SAE J1930
850	Series 60	365@1800	194.0	116.1	1350@1200	244.6	97.6	TC, PCM, CAC
851		350@2100	166.4	116.2	1350@1200	244.6	97.6	
852		350@1800	185.4	111.0	1350@1200	244.6	97.6	
853		330@2100	157.0	109.6	1350@1200	244.6	97.6	
854		330@1800	173.7	104.0	1350@1200	244.6	97.6	
855		350@2100	166.4	116.2	1250@1200	227.3	90.7	
856		350@1800	185.4	111.0	1250@1200	227.3	90.7	
857		330@2100	157.0	109.6	1250@1200	227.3	90.7	
858		330@1800	173.7	104.0	1250@1200	227.3	90.7	
862		330/350-2100			1250@1200			
861		330/350-1800			1350@1200			
860		330/350-2100			1350@1200			
859		330/365-1800						

